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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/777,582	02/12/2004	Larry D. Kinsman	2269-5348.1US (02-0172.01)	4919
24247	7590	08/11/2004	EXAMINER	
TRASK BRITT P.O. BOX 2550 SALT LAKE CITY, UT 84110			CLARK, JASMINE JHIHAN B	
			ART UNIT	PAPER NUMBER
			2815	

DATE MAILED: 08/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/777,582

Applicant(s)

KINSMAN, LARRY D.

Examiner

Jasmine J Clark

Art Unit

2815

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6, 13-16, 20-22, 26-28 and 30 is/are rejected.
- 7) ☒ Claim(s) 7-12, 17-19, 23-25 and 29 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 02/12/04.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-6, 13, 26-28, and 30 are rejected under 35 U.S.C. 102(b) as being anticipated by Ishio et al. (US 6,118,184).

Ishio shows a structure of a semiconductor device comprising a leadframe (see Fig. 2) including a die paddle 5 and a plurality of lead fingers 6; a first semiconductor die 1a adhered to the die paddle, the first semiconductor die 1a exhibiting a first size and having a plurality of bond pads, wherein at least one bond pad of the plurality of bond pads of the semiconductor die 1a is electrically coupled to at least one lead finger of the plurality of lead fingers; and a second semiconductor die 1b adhered to the die paddle 5, the second semiconductor die 1b exhibiting a second size different from the first size (see column 6, lines 37-40) and having a plurality of bond pads, wherein at least one bond pad of the plurality of bond pads of the second semiconductor die 1b is electrically coupled to the at least one lead fingers, wherein the second semiconductor die 1b exhibits circuitry substantially identical in function to circuitry of the first semiconductor die 1a.

Art Unit: 2815

Concerning claim 2, Ishio further teaches including an amount of insulating material 11 encapsulating the first semiconductor die 1a, the second semiconductor die 1b, the die paddle 5 and a portion of each of the plurality of lead fingers.

Concerning claims 3 and 13, wherein the die paddle exhibits a peripheral outline which is smaller than a peripheral outline of the first semiconductor line, please see Fig. 2.

Concerning the limitations of claims 4 and 5, please also see Fig. 2.

Concerning claim 6, wherein at least one of the first semiconductor die 1a and the second semiconductor die 1b is adhered to the die paddle with the die pad material, for example thermosetting silver paste (see column 7, lines 10-15) which is a thermally conductive material.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over the reference as applied to claims 1-6, 13, 26-28, and 30 above, and further in view of Choi et al. (US 5,677,569).

As per the above discussion, the applied reference fails to teach a memory device and a carrier substrate. Choi shows in Fig. 6 or Fig. 7 a memory device has a

Art Unit: 2815

plurality of individual packages stacked over one another between upper and lower plates disposed on a carrier substrate (PCB). Hence, it would have been obvious to include a carrier substrate such as PCB, as is notoriously known.

3. Claims 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references as applied to claims 1-6, 13-16, 26-28, and 30 above, and further in view of Andric et al. (US 6,707,684 B1).

As per the above discussion, the applied references teach including a carrier substrate such as PCB but fail to teach including a computing system comprising a processor operably coupled to the carrier substrate. Andric teaches in column 1, lines 42+, "[I]n personal computer (PC) systems, the processor is commonly mounted in a socket that is itself soldered to the PCB...". Hence, it would have been obvious to a person of ordinary skill in the pertinent art to couple the processor to the carrier substrate such as PCB, as is notoriously known.

#### ***Allowable Subject Matter***

4. Claims 7-12, 17-19, 23-25, and 29 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The applied references fail to teach and/or suggest the limitations as set forth in claims 7-12, 17-19, 23-25, and 29.

***References Cited***

5. The references of interest are cited: similar to the structure of Ishio are Nakanishi (US 6,072,243), Golwalker et al. (US 5,545,922), and Minamide et al. (JP 3-109760).

***Telephone Inquiry Contacts***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jasmine J Clark whose telephone number is (571) 272-1726. The examiner can normally be reached on Flex.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Thomas can be reached on (571) 272-1664. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jjbc/08/05/04

**JASMINE CLARK  
PRIMARY EXAMINER**

